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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,672	08/27/2001	John Moore	M4065.0475/P475	2511

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04/29/2003

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EXAMINER

PIZARRO CRESPO, MARCOS D

ART UNIT PAPER NUMBER

2814

DATE MAILED: 04/29/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,672

Applicant(s)

MOORE, JOHN

Examiner

Marcos D. Pizarro-Crespo

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2003 and 27 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 22-57 is/are pending in the application.
- 4a) Of the above claim(s) 1-16, 31-46, 55, 56 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-20 and 22-27 is/are allowed.
- 6) ☒ Claim(s) 28-30 and 47-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-20 and 22-57 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 27 January 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11, 12, 13 6) ☐ Other: _____

Application/Control Number: 09/938,672 (Final Rejection)
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Attorney's Docket Number: M4065.0475/P475

Filing Date: 8/27/2001

Claimed Foreign Priority Date: none

Applicant(s): Moore

Examiner: Marcos D. Pizarro-Crespo

DETAILED ACTION

This Office action responds to the amendments in papers no. 15 and 17 filed on 1/24/2003 and 1/27/2003, respectively.

Acknowledgment

1. The amendments in papers no. 15 and 16, filed on 1/24/2003 and 1/27/2003, respectively, in response to the Office action in paper no. 10, mailed on 8/26/2002, has been entered. The present Office action is made with all the suggested amendments being fully considered. Accordingly, pending in this Office action are claims 1-20 and 22-57.

Election/Restrictions

2. Newly submitted claims 55 and 56 are directed to an invention that is independent or distinct from the invention originally claimed for the reasons set forth in the restriction requirement in paper no. 8, mailed on 5/29/2002.

3. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 55 and 56 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Drawings

4. The proposed drawing correction and/or the proposed substitute sheets of drawings in paper no. 16, filed on 1/27/2003, have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 28-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Lines 2 and 3 of claim 28 recite the limitation "said first and second access transistors". There is insufficient antecedent basis for this limitation in the claim.

8. Line 2 of claim 29 recites the limitation "said first access transistor". There is insufficient antecedent basis for this limitation in the claim.

9. Line 2 of claim 30 recites the limitation "said first and second access transistors". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 47-54 and 57 are rejected under 35 U.S.C. 102(e) as being anticipated by Kozicki (US 2002/0168820).

12. Regarding claim 47, Kozicki shows (see, e.g., figs. 21-24 and 29) all aspects of the instant invention including a method of fabricating a memory device, comprising:

- forming a first memory element **2904** comprising a first chalcogenide material layer and a first metal-containing layer
- forming a second memory element **2902** comprising a second chalcogenide material and a second metal-containing layer
- forming a first electrode **2938** in electrical communication with one side of the first memory element
- forming a second electrode **2930** in electrical communication with one side of the second memory element
- forming a common electrode **2920** in electrical communication with a second side of each of the memory elements

13. Regarding claim 48, Kozicki shows that the metal-containing layers of the first and second memory elements may each contain silver (see, e.g., [0040]).

14. Regarding claim 49, Kozicki shows that the metal-containing layers may be silver layers (see, e.g., [0043]).

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15. Regarding claim 50, Kozicki shows that the common electrode may be an anode electrode having the metal-containing layers of the first and second memory elements of opposite sides thereof (see, e.g., [0094], [0102], [0107]).

16. Regarding claim 51, Kozicki shows that the metal-containing layers may be silver layers (see, e.g., [0043]).

17. Regarding claims 52 and 53, Kozicki shows that the method may further comprise forming an access device **610** for each of the memory elements (see, e.g., fig.6, [0107]).

18. Regarding claim 54, Kozicki shows that the method may further includes forming an access circuitry for separately accessing the memory elements (see, e.g., fig. 6, [0107]).

19. Regarding claim 57, Kozicki shows (see, e.g., figs. 21-24 and 29) all aspects of the instant invention a method of forming a multi-cell programmable device, the method comprising the steps:

- forming a first electrode **2938** on a surface of a substrate (see, e.g., [0035])
- forming a first ion conductor portion overlying the first electrode **2938**
- forming a second electrode **2920** overlying the first ion conductor portion
- forming a second ion conductor portion overlying the second electrode **2920**
- forming a third electrode **2930** overlying the second ion conductor portion

Allowable Subject Matter

20. Claims 17-20 and 22-27 are allowed.

21. Claims 28-30 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action, set forth in this Office action.

Conclusion

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

23. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

24. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. Papers should be faxed to Art Unit 2814 via the Art Unit 2814 Fax Center located in Crystal Plaza 4, room 3C23. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is **(703) 308-7722** or **-7724**. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Marcos D. Pizarro-Crespo** at **(703) 308-6558** and between the hours of 9:30 AM to 8:00 PM (Eastern Standard Time) Monday through Thursday or by e-mail via Marcos.Pizarro@uspto.gov. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy, can be reached on (703) 308-4918.

26. Any inquiry of a general nature or relating to the status of this application should be directed to the **Group 2800 Receptionist** at **(703) 308-0956**.

27. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass(es): 438/95,98,102,103; 257/2-5	4/22/2003
Other Documentation: PLUS Analysis	4/22/2003
Electronic Database(s): EAST (USPAT, EPO, JPO)	4/22/2003


LONG PHAM
PRIMARY EXAMINER

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